

Amendments to the Specification:

Beginning at page 3, line 30 – please make the following amendments

In practice, the present invention has been found to reduce the data rewrite rate from 30% to a small fraction of 1% for a typical configuration and a background bit ~~error~~error rate of 1 in 10^5 , while making subsequent retrieval or restore operations reliable.

Beginning at page 9, line 20 -- please make the following amendments

Referring to Figure 2 of the drawings, there is illustrated schematically a dataset 110, consisting of 16 sub datasets 112, each containing 54 rows of data. In this embodiment of the present invention, the sub datasets 112 are the basic data units processed by the ECC algorithm, and each sub dataset is converted to a C1 sub dataset by processing using a C1 ECC algorithm. The datasets 110 are written sequentially into a main buffer 14 which acts to ~~smooth~~smooth the data to provide a substantially steady stream of data for transfer to the magnetic tape cartridge 12. As each row of a dataset 10 is written into the main buffer 14 from the logical formatter 16, it is notionally split into two equal sets of data, and 6 parity bytes (Reed-Solomon) are added to each set by a C1 generator to produce two codewords. The bytes of the two codewords in each row are interleaved to produce a matrix of C1 codeword pairs (CCP's) which is stored in the main buffer 14 before transfer to a physical formatter 16.

Beginning at page 10, line 1 – please make the following amendments

Datasets 110 are taken sequentially from the main buffer 14 by the physical formatter 16 and written to the magnetic tape 12. Prior to writing the data to the tape 12, the physical formatter 16 adds a header 118 to each CCP. It also notionally splits each sub dataset 112 into a number of C2 codewords and adds 10 parity bytes to each. The header 118 ~~consists of~~ includes, among other things, a dataset number and a CCP designator (i.e. a number from 0 - 1023) to indicate which dataset a CCP comes from and where in that dataset the CCP was located. This information is important when it comes to retrieving the data from the magnetic tape. The physical formatter 16 also RLL (run length limited) encodesF all data and adds synchronisation fields.

Beginning at page 11, line 24 – please make the following amendment

Referring to Figure 6 of the drawings, a write chain controller according to an exemplary embodiment of the invention comprises an updater 210 which is the entity in charge of deciding which CQ set to write next to a magnetic tape cartridge (not shown). The selected CQ set is sent to a 'next ccp' block 212 for sequencing of CCP's within that CQ set. The 'next ccp' block 212 also requests further CQ sets as necessary.